

ment hospitals from charging patients in situations where that total admission cost exceeds the case rate. These policies aim to provide financial protection to patients while promoting efficiency in hospitals. There are concerns that tertiary government hospitals might end losing money as they managed mostly complicated cases. To assess this possibility, the cost of admission for pneumonia cases admitted in the internal medicine ward of a tertiary government hospital in the Philippines was estimated. The proportion of pneumonia admissions where costs did not exceed case rates was also determined. **METHODS:** A random sample of admissions for pneumonia for two severity classes (moderate-risk and high-risk) from January 1 to June 30 2013 was obtained. Costs considered were diagnostic tests, medications, mechanical ventilator use and overhead costs. Due to the lack of billing reports, costs of diagnostics tests and medications were computed via tallies from chart review. Overhead costs were estimated using WHO-CHOICE 2007 values for the Philippines. **RESULTS:** A sample of 112 moderate-risk and 42 high-risk pneumonia cases were included in the study. The mean total costs were US\$ 564.55 for moderate-risk and US\$ 727.01 for high-risk. 29.5% of moderate-risk cases had a total cost less than the case rate of US\$ 333 and 68.2% of high-risk cases had a total cost less than the case rate of US\$ 711.11. Considering costs and reimbursements for all admissions, the hospital will lose US\$ 25,895.11 due to moderate-risk and US\$ 2,121.77 due to high-risk admissions. **CONCLUSIONS:** Estimated mean total costs exceed the case rates of PhilHealth for pneumonia. The case rates may not be adequate to cover the total costs of admission in a government tertiary hospital in the Philippines.

PHS51

DIRECT COSTS COMPARISON OF MEDICAL CARE BEFORE AND AFTER HEART FAILURE HOSPITALIZATION IN A MEDICARE POPULATION

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OBJECTIVES: Compare direct costs of medical care before and after heart failure (HF) hospitalization in a Medicare population. **METHODS:** A 5% (n=3,493,434) national sample of Medicare beneficiaries for the years 2006–2012 was used to identify individuals with at least 65 years of age at the date of hospital admission for HF enrolled in Medicare Parts A and B and not enrolled in a Medicare Advantage plan. Total costs were summed (in constant 2012 dollars) for all services utilized by the hospitalized beneficiary every month during observation the period. The total costs for each month before, after and during the month of HF hospitalization were plotted. Costs of an HF episode were calculated as difference in total reimbursements in the six months during and after the month of hospitalization and the six months preceding the event. The incremental analysis allows individuals to serve as their own controls. **RESULTS:** There were 63,678 eligible episodes of HF hospitalizations. In the six months prior to the month of hospitalization total costs were \$14,212 and in the six months following discharge, total costs were \$24,645. The cost (total costs for all services utilized) during the month of hospitalization was \$14,967. **CONCLUSIONS:** The cost of care in the six months following a HF hospital discharge was more than \$10,000 higher than those in 6 months prior to the hospitalization. Avoiding hospitalizations for patients with HF would be desirable not only because they are costly but also because the cost of care remains higher for at least six months following the hospitalization.

PHS52

COST OF A PHARMACIST-LED PNEUMONIA EDUCATION AND IMMUNIZATION PROGRAM FOR OLDER PHILADELPHIANS

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OBJECTIVES: To measure the intervention costs of the Pharmacists' Pneumonia Prevention Project (PPPP), a community-based pneumonia education and vaccination program administered to older Philadelphians in 2014. **METHODS:** PPPP involved a pharmacist informational presentation, a live skit, small-group breakouts, and optional vaccination. Attendees could consent to participate in program assessments if they were aged 50+, cognitively intact, and English speaking. Recruitment and program coordination were completed through partnerships with churches and senior centers. The total cost from a health system perspective was the sum of time costs (pharmacy, community health workers; CHWs for travel, training, supervision and planning), supplies (vaccine, medical, and office supplies), actor and site fees. Time requirements for each program date were recorded using a staff log. Wages were applied to time using U.S. Bureau of Labor Statistics rates plus fringe benefits applicable to each partnering institution. Volunteer pharmacy students were assigned zero time costs. **RESULTS:** Among 276 individuals who attended PPPP, 203 consented to program assessments and were mostly female (74.9%), black (80.4%), and the mean age was 74. PPPP was offered on 8 dates at 4 community locations. Mean staff requirements for each date were 5.5 students, 3.6 pharmacists, and 2 CHW. The total program cost was \$32,513 (per-attendee cost = \$118). Time costs associated with planning (\$11,927), program delivery (\$8,659), and non-volunteer travel (\$2,257) represented 70.3% of the total cost. Time and expenses for vaccination (\$7,861) also contributed substantially to PPPP costs (24.2%), while actors' fees (\$1,750) represented 5.4%. Excluding vaccination costs and actor costs would yield per-attendee costs of \$89.32 and \$82.98, respectively. **CONCLUSIONS:** Resources requirements for PPPP are high, but will be further evaluated in terms of outcomes achieved (knowledge gains, vaccination rate). Costs could be offset by reimbursement for vaccination, omitting this component, and/or using a video skit rather than live actors.

PHS54

AN ACCESSIBLE APPROACH TO ESTIMATE THE DIRECT MEDICAL COSTS OF TYPE 2 DIABETES MELLITUS FOR THE BRAZILIAN NATIONAL HEALTH SYSTEM

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OBJECTIVES: To study the cost related to the management of type 2 diabetes mellitus (T2DM) in public health care by standard approach as a means to assist in the evaluation of health services in Brazil. **METHODS:** A small municipality was considered for this study, with less than 50,000 habitants, it is representative of 81% of the state's municipalities and 89% of Brazil's. The data sources used were obtained from the Municipal Health Office and public data systems online. Direct medical costs were selected according to standard care recommended by the Ministry of Health and Brazilian Associations of Cardiology and Diabetes, and lately divided into three categories of analysis: Health professional salary, Procedures and tests costs, and Medication costs, both for Primary Health Care (PHC) and Medium/High Complexity Care (MHCC). **RESULTS:** In 2011, the total expense in a year for a user with T2DM was US\$ 491.04, regarding the individual without complication, attended in PHC. After developing chronic complications (either microvascular or macrovascular), the patient continues to receive PHC, but also needs the attention of specialists, therefore costs for specific treatments in MHCC services were added to the PHC costs. The sum ranged from US\$ 732.86 for nephropathy to US\$ 3182.59 for Acute Myocardial Infarction. In evaluation of each category of analysis, the investment made by the National Health System in the management of T2DM showed uneven distribution, where a subcategory of Health professionals salary, the PHC's doctors salary, represented an important share of spending in exchange of others categories. **CONCLUSIONS:** The standard cost method is presented as an alternative that offers greater convenience and flexibility in the determination of costs to assist health managers in decision-making, considering the shortcomings of Brazilian's information system.

PHS55

COST ANALYSIS OF PATIENTS WITH ACUTE CORONARY EVENT IN A COMMERCIAL INSURANCE COMPANY IN COLOMBIA —SALUDCOOP— IN 2013

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OBJECTIVES: To measure the cost associated with an acute coronary event through a retrospective cohort study of patients in Saludcoop EPS, Cafesalud Cruz Blanca EPS and EPS during the first six months of 2013 in Colombia. **METHODS:** Through a retrospective analysis of 2943 patients with acute coronary event were identified with ICD-10-associated acute coronary syndrome, which were reported by each of the EPS to the Ministry of Health and Social Protection of Colombia. The first part of the study involved the characterization of the population by age group, gender, region and comorbidities. The second part includes an analysis of the use of hospital services and average stay in the hospital. In the third part the analysis included the average cost of interventions such as angioplasty, heart surgery and thrombolysis during the first six months after the acute coronary event were included. **RESULTS:** The male population has a higher incidence of acute coronary event at a younger age than that of the female population. The male population of the department of Antioquia recorded the most interventions received. The average cost per patient with acute coronary event during the first month was 14,381,501 Colombian Pesos and 2,493,801 Colombian Pesos per patient during the sixth month. **CONCLUSIONS:** the first month represented the highest cost for acute coronary event with an average of 13,382,501 COP, which is 53.35% of the total cost per event.

PHS56

IMPACT OF CLINICAL PHARMACIST INTERVENTIONS ON THE PRESCRIBING HABIT AND COST SAVING

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OBJECTIVES: To assess the impact of clinical pharmacist intervention (CPI) on prescribing habit and cost saving throughout 12 months duration for patients receiving some and the same medications include (Human Albumin 20% 50ml, Meropenem 500 mg and Ciprofloxacin 200 mg), this was via a comparison made between the NO-CPI (observation only) and Direct-CPI phases, in term of the number of vials dispensed monthly. **METHODS:** It is an observational cohort study and it is divided into two phases; Phase-I: to evaluate prescribing habit of the prescribers throughout two months duration (30 days with NO-CPI and 30 days with Direct-CPI) for patient using Human Albumin. While phase-II: to assess the impact of Direct-CPI versus NO-CPI on cost saving throughout 10 months duration (5 months with NO-CPI and 5 months with Direct-CPI). The number of dispensed vials for each item was recorded by CP. **RESULTS:** The study findings in phase-I showed that Direct-CPI lead to statistically significant ($P < 0.0001$) improvement of prescribing for human albumin 20%, especially in cases with albumin level > 3 g/dl, it was 36% with NO-CPI versus 1.6% with Direct-CPI, and in cases with albumin level < 2 g/dl, and it was 6% with NO-CPI versus 42% with Direct-CPI. In phase II, during 5-months of Direct-CPI compared with the same duration of No-CPI, there was a remarkable monthly cost saving, and it was 54% for Human Albumin, 59% for Meropenem and 59% for Ciprofloxacin. This resulted in total cost saving for all three items equal to 123,735 US Dollar during the five months of Direct-CPI. **CONCLUSIONS:** Direct-CPI can significantly improve prescribing habit and lead to a substantial cost saving.

PHS57

WITHDRAWN